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71 Applicant: DELMA ELEKTRO UND MEDIZINISCHE APPARATEBAU GESELLSCHAFT, GmbH
[DELMA ELEKTRO AND MEDICAL DEVICE PRODUCTION CORPORATION, LLC]
Ludwigstaler Strasse 17-27
D-78532 Tuttlingen, Germany

72 Inventor: Dornhof, Konstantin
Bismarckstrasse 89
W-7208 Spaichingen, Germany

74 Representative: Morgan, James G. et al
Certified Physicist, Dr. Manitz,
Dr. Finsterwald, Certified Profession Engineer, Certified Physicist Rotermund.
Certified Chemist, Dr. Heyn, B. Sc.
(Physicist) Morgan, Postfach 22 16 11, D-80506, Munich, Germany

54 High-frequency surgical instrument

57 A high-frequency surgical instrument includes a high-frequency generator (13) loading two adjustable electrodes (11, 12) that are applicable to patient tissue, said generator possessing a current source (14) adjustable with respect to its power output and an oscillator (15) powered by it that includes an output end stage, and produces a specific power output depending on the adjustment of the current source (14) and the electrical resistance (R) of the tissue between the electrodes (11, 12). A number of specified curves is stored in a digital buffer (19) that are representative of a specific functional dependence between the power output of the high-frequency generator (13) and the electrical resistance (R) of the tissue, and that take into account the characteristic curves of the high-frequency generator (13). A control address is stored at a control unit (21) connected with the digital buffer (19) corresponding to the actual electrical resistance (R) of the tissue and to the selected operating mode.